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U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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## COPPER IN MAY 1997

Mine production was essentially unchanged in May. Smelter production fell 10%, to the lowest level in almost 2 years, following the 6-week closure of Kennecott's Garfield, Utah, smelter in mid-April for modifications and maintenance. A decline in electrolytically refined copper downstream from the

smelter was partly off-set by increases in electrowon production and secondary refined production. Despite the smelter bottleneck, domestic mine, smelter, and refinery production for the first 5 months of the year were all nominally above those for the equivalent period in 1996.

TABLE 1  
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES 1/

(Metric tons, unless noted)

	Source table 2/	1996 p/	1997		January- May
			April	May	
Production:					
Primary:					
Mine, recoverable	(2)	1,910,000	159,000 r/	158,000	782,000
Smelter 3/	(3)	1,300,000	108,000	96,700	559,000
Refinery:					
Electrolytic:					
Domestic	(4)	1,290,000	111,000 r/	103,000	548,000
Foreign	(4)	147,000 r/	12,000	10,600	47,400
Electrowon	(4)	574,000	46,700 r/	48,200	234,000
Total	(4)	2,010,000	169,000 r/	162,000	830,000
Secondary recoverable copper:					
Refineries	(5)	333,000 r/	32,600 r/	35,400	170,000
Ingot makers 4/	(5)	124,000	10,300	10,300	51,600
Brass and wire-rod mills	(5)	717,000	68,800	67,400	329,000
Foundries, etc.	(5)	62,400	5,200	5,200	26,000
Consumption:					
Total apparent	(8)	2,820,000	251,000	NA	NA
Refined (reported)	(7)	2,630,000	244,000 r/	219,000	1,160,000
Purchased copper-base scrap	(9)	1,640,000	151,000	151,000	741,000
Stocks at end of period:					
Total refined	(11)	147,000	161,000	173,000	XX
Blister, etc.	(11)	173,000	134,000 r/	123,000	XX
Prices:					
U.S. producer cathode (cents per pound)	(12)	109.044	113.034	117.064	114.750
Imports:					
Ores and concentrates 5/	(14)	72,400	10,000	NA	NA
Refined	(14)	543,000	43,600	NA	NA
Exports:					
Ores and concentrates 5/	(15)	195,000	16,600	NA	NA
Refined	(15)	170,000	6,460	NA	NA

p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Numbers in parentheses refer to the detailed tables where these data are located.

3/ From domestic and foreign ores.

4/ 1996 and 1997 monthly data estimated based on 1995 monthly average.

5/ Copper content.

TABLE 2  
MINE PRODUCTION OF RECOVERABLE COPPER  
IN THE UNITED STATES 1/

(Metric tons)

Period	State		Total
	Arizona	Others 2/	
1996: p/			
May	106,000 r/	53,700	160,000 r/
June	106,000	57,100 r/	163,000
July r/	103,000	58,400	162,000
August	105,000 r/	58,900	164,000 r/
September	100,000 r/	58,400 r/	158,000
October	105,000	59,300	164,000
November r/	101,000	59,200	161,000
December	104,000	60,500 r/	164,000 r/
Jan. - May	512,000	262,000	773,000
Year total	1,240,000	674,000 r/	1,910,000
1997:			
January	98,200	59,400	158,000
February	92,800	54,100	147,000
March	107,000	52,700 r/	160,000 r/
April	102,000	56,500 r/	159,000 r/
May	98,500	60,000	158,000
Jan. - May	499,000	283,000	782,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes production from Idaho, Illinois, Missouri, Montana, Nevada, New Mexico, Utah, and Wisconsin.

TABLE 3  
COPPER 1/ PRODUCED AT SMELTERS IN THE UNITED STATES, BY SOURCE 2/

(Metric tons, copper content)

Period	Domestic and foreign ores		Scrap	Total
1996: p/				
May	97,600	27,400		125,000
June	105,000	29,300		134,000
July	106,000	29,500		136,000
August	99,600	28,100		128,000
September	114,000	26,800		140,000
October	118,000	27,500		146,000
November	112,000	25,100		137,000
December	116,000	30,800		146,000
Jan. - May	530,000	142,000		672,000
Year total	1,300,000	339,000		1,640,000
1997:				
January	118,000	28,200		146,000
February	110,000	25,800		136,000
March	126,000	28,700		155,000
April	108,000	22,800		131,000
May	96,700	25,900		123,000
Jan. - May	559,000	131,000		690,000

p/ Preliminary.

1/ Includes blister, anode and black copper from primary or secondary sources.

2/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 4  
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY 1/

(Metric tons)

Period	Primary materials				Scrap			Total refined
	Electrolytically refined 2/		Electrowon	Total	Electro-lytically refined 2/	Fire refined	Total	
	Domestic 3/	Foreign						
1996: p/								
May	107,000	13,900	50,700	172,000	16,900	12,700	29,500 r/	201,000
June	94,600	9,440 r/	48,300	152,000	17,300	13,700	30,900	183,000
July	110,000 r/	11,700 r/	48,200	170,000 r/	19,700 r/	6,310	26,000 r/	196,000
August	102,000	12,000	47,100	161,000	14,000	11,000	25,000	186,000
September	104,000 r/	13,400 r/	45,900	163,000	13,200 r/	13,900	27,100 r/	190,000
October	118,000 r/	8,970 r/	51,600	179,000 r/	21,100 r/	13,500	34,600 r/	213,000
November	105,000	9,250 r/	47,800	162,000 r/	15,800 r/	10,900	26,800 r/	189,000
December	113,000	8,670 r/	49,700	172,000 r/	18,100 r/	7,800	25,900 r/	198,000
Jan. - May	540,000	74,000	235,000	849,000	73,200	63,300	137,000	986,000
Year total	1,290,000	147,000 r/	574,000	2,010,000	193,000 r/	140,000	333,000 r/	2,340,000
1997:								
January	114,000	8,240	47,800	170,000	24,500	11,500	36,000 r/	206,000
February	109,000	9,050	43,700	162,000	18,000	12,000	30,000	192,000
March	112,000	7,570	48,000 r/	167,000 r/	21,800	14,600	36,400	204,000 r/
April	111,000 r/	12,000	46,700 r/	169,000 r/	21,800 r/	10,800	32,600 r/	202,000 r/
May	103,000	10,600	48,200	162,000	22,300	13,200	35,500	198,000
Jan. - May	548,000	47,400	234,000	830,000	108,000	62,100	170,000	1,000,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Based on source of material at smelter level.

3/ Includes fire-refined copper.

TABLE 5  
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASED SCRAP 1/

(Metric tons, copper content)

Period	Refineries 2/		Ingot makers 3/		Brass and wire-rod mills		Foundries, etc. 4/		Total 5/
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1996: p/									
May	10,000	19,500 r/	2,890	7,440	60,100	4,230	2,240	2,960	109,000
June	10,900	20,000	2,890	7,440	58,700	4,960	2,240	2,960	110,000
July	6,040	20,000 r/	2,890	7,440	50,100	3,880	2,240	2,960	95,500 r/
August	8,310	16,700	2,890	7,440	55,600	3,870	2,240	2,960	100,000
September	10,300	16,800 r/	2,890	7,440	55,000	3,850	2,240	2,960	101,000
October	11,000 r/	23,700 r/	2,890	7,440	56,300	3,640	2,240	2,960	110,000 r/
November	8,740 r/	18,000 r/	2,890	7,440	53,400	4,580	2,240	2,960	100,000 r/
December	5,740 r/	20,100 r/	2,890	7,440	52,300	4,410	2,240	2,960	98,100 r/
Jan. - May	50,100	86,500	14,500	37,200	289,000	17,500	11,200	14,800	520,000
Year total	111,000	222,000 r/	34,700	89,200	670,000	46,700	26,900	35,600	1,240,000 r/
1997:									
January	10,800	25,200	2,890	7,440	61,500	3,340	2,240	2,960	116,000
February	10,600	19,400	2,890	7,440	60,100	1,170	2,240	2,960	107,000
March	13,300	23,100	2,890	7,440	64,000	2,370	2,240	2,960	118,000
April	10,500 r/	22,100 r/	2,890	7,440	65,900	2,880	2,240	2,960	117,000 r/
May	11,700	23,800	2,890	7,440	64,500	2,900	2,240	2,960	118,000
Jan. - May	56,800	113,000	14,500	37,200	316,000	12,700	11,200	14,800	577,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Electrolytically refined and fire-refined scrap based on source of material at smelter level.

3/ Data no longer collected monthly; 1995 and 1996 data estimated based on 1995 annual data.

4/ Estimate based on 1995 annual data.

5/ Does not include an estimate, based on reported 1995 data, of 3,100 tons per month from new scrap and 2,330 tons per month from old scrap of copper recovered from scrap other than copper-base.

TABLE 6  
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD MILL SEMIFABRICATES 1/

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire rod mills	Brass mills	Wire rod mills	Brass mills	Wire rod mills
1996: p/						
May	130,000	173,000	129,000	165,000	51,000	63,200
June	131,000	163,000	126,000	151,000	55,200	75,200
July	111,000	139,000	114,000	152,000	52,200	62,900
August	130,000	142,000	132,000	156,000	50,300	48,500
September	135,000	163,000	136,000	158,000	49,300	53,200
October	139,000	180,000	139,000	184,000	49,400	50,100
November	135,000	176,000	134,000	171,000	50,700	55,000
December	114,000	155,000	113,000	143,000	52,000	66,500
Jan. - May	654,000	798,000	655,000	804,000	XX	XX
Year total	1,550,000	1,920,000	1,550,000	1,920,000	XX	XX
1997:						
January	134,000	178,000	135,000	183,000	51,100	61,300
February	132,000	169,000	132,000	163,000	51,500	67,200
March	143,000	173,000	143,000	171,000	51,900	69,200
April	137,000	188,000 r/	134,000	185,000 r/	55,000	72,000 r/
May	135,000	176,000	137,000	175,000	52,800	72,500
Jan. - May	682,000	884,000	681,000	878,000	XX	XX

p/ Preliminary. r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 7  
CONSUMPTION OF REFINED COPPER 1/

(Metric tons)

Period and item	Wire rod mills	Brass mills 2/	Other plants 3/	Total
1996: p/				
May	184,000	47,500	4,630	236,000
June	164,000	49,400	4,630	218,000
July	147,000	41,900	4,630	193,000
August	154,000	50,100	4,630	209,000
September	162,000	55,600	4,630	222,000
October	185,000	54,100	4,630	244,000
November	177,000	47,300	4,630	229,000
December	150,000	45,700	4,630	200,000
Jan. - May	846,000	244,000	23,200	1,110,000
Year total	1,980,000	588,000	55,600	2,630,000
1997:				
January	179,000	55,000	4,630	239,000
February	172,000	48,600	4,630	225,000
March	174,000	55,500	4,630	234,000
April	188,000	51,000	4,630	244,000 r/
May:				
Cathodes	165,000	30,400	1,120	196,000
Wire bars	--	W	W	W
Ingots and ingot bars	--	1,730	1,660	3,380
Cakes and slabs	--	5,390	W	5,390
Billets and other	--	12,300	1,860	14,200
Total	165,000	49,800	4,630	219,000
Jan. - May	878,000	260,000	23,200	1,160,000

p/ Preliminary. W Withheld to avoid disclosing company proprietary data; included in "Billets and other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ In 1995, brass mills consumed 2,210 tons of refined lead, 706 tons of pig tin, 3,870 tons of refined nickel, and 64,100 tons of slab zinc.

3/ Monthly consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers; estimated based on 1995 annual data.

TABLE 8  
U.S. APPARENT CONSUMPTION OF COPPER 1/

(Metric tons)

Period	Refined copper production	Copper in old scrap 2/	Net refined imports	Stock change during period	Apparent consumption
1996: p/					
May	172,000	36,500	40,400	(26,400)	222,000
June	152,000	37,700	27,100	(7,400)	210,000
July	170,000 r/	36,600 r/	30,600	23,300	214,000
August	161,000	33,300	40,500	(6,660)	228,000
September	163,000	33,400 r/	41,300	(13,100)	225,000
October	179,000 r/	40,000 r/	22,800	(4,510)	237,000
November	162,000 r/	35,300 r/	42,800	(14,100)	226,000
December	172,000 r/	37,300 r/	26,600	21,500	214,000
Jan. - May	677,000	131,000	101,000	10,900	842,000
Year total	2,010,000	421,000 r/	374,000	(16,500)	2,620,000
1997:					
January	170,000	41,300	44,300	4,510	251,000
February	162,000	33,300	38,200	2,440	231,000
March	167,000 r/	38,200	37,100	7,060	236,000 r/
April	169,000 r/	37,700 r/	44,800	467	251,000
May	162,000	39,400	NA	12,200	NA
Jan. - May	668,000	150,000	164,000	14,500	968,000

p/ Preliminary. r/ Revised. NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes reported monthly production of copper from old scrap of copper-base and of non-copper-base materials and estimates for annual reporters based on 1995 data.

TABLE 9  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers 2/		Brass and wire-rod mills 3/		Foundries, etc. e/		Total scrap used
	New scrap 2/	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1996: p/									
May	10,800	31,400	3,870	11,300	75,500	5,100	2,570	3,390	144,000
June	13,200	36,300	3,870	11,300	73,200	5,990	2,570	3,390	150,000
July	8,120	27,700	3,870	11,300	63,800	4,790	2,570	3,390	126,000
August	10,000	28,100	3,870	11,300	70,700	4,880	2,570	3,390	135,000
September	12,700	27,100	3,870	11,300	69,100	5,010	2,570	3,390	135,000
October	11,600	33,700	3,870	11,300	71,600	4,510	2,570	3,390	143,000
November	10,700	29,200	3,870	11,300	67,900	5,530	2,570	3,390	134,000
December	7,700	31,800	3,870	11,300	66,100	5,400	2,570	3,390	132,000
Jan. - May	55,500	145,000	19,300	56,600	362,000	21,600	12,900	16,900	690,000
Year total	130,000	359,000	46,400	136,000	845,000	57,700	30,800	40,600	1,640,000
1997:									
January	10,900	30,700	3,870	11,300	77,800	3,420	2,570	3,390	144,000
February	10,700	34,700	3,870	11,300	76,300	1,240	2,570	3,390	144,000
March	12,500	33,100	3,870	11,300	81,700	2,470	2,570	3,390	151,000
April	11,000	33,200	3,870	11,300	83,200	2,970	2,570	3,390	151,000
May	12,800	33,500	3,870	11,300	80,500	2,980	2,570	3,390	151,000
Jan. - May	57,800	165,000	19,300	56,600	399,000	13,100	12,900	16,900	741,000

e/ Estimated. p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data for 1996 and 1997 are estimated from 1995 annual data.

3/ Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/ 2/

(Metric tons, gross weight)

Scrap type and processor	1996 p/		1997			
	Jan. - May	Year total	March	April	May	Jan. - May
No. 1 wire and heavy:						
Smelters and refiners	64,900	147,000	15,300	12,200	14,900	67,300
Brass and wire-rod mills	155,000	355,000	32,200	35,000	35,400	165,000
No. 2 mixed heavy and light:						
Smelters and refiners	85,300	215,000	20,300	18,700	20,500	101,000
Brass and wire-rod mills	14,900	34,600	2,730	3,170	3,620	15,900
Total unalloyed scrap:						
Smelters and refiners	150,000	362,000	35,600	30,900	35,500	168,000
Brass mills	169,000	390,000	34,900	38,200	39,000	181,000
Red brass: 3/						
All plants	27,300	66,200	5,740	5,580	5,700	28,100
Leaded yellow brass:						
All plants	164,000	397,000	38,200	37,200	34,200	181,000
Yellow and low brass:						
Smelters and refiners	(4/)	(4/)	(4/)	(4/)	(4/)	(4/)
Brass mills	21,900	52,000	3,760	4,020	3,680	18,000
Cartridge cases and brass:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	20,200	45,700	5,260	5,130	5,210	24,400
Auto radiators:						
Smelters and refiners	30,400	73,000	6,080	6,080	6,080	30,400
Bronzes:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	4,780	11,200	1,070	1,440	1,440	6,100
Nickel-copper alloys:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	9,300	20,500	1,950	1,280	1,210	7,320
Low grade & residues:						
Smelters and refiners	35,200	88,800	7,300	9,840	8,250	38,700
Other alloy scrap: 5/						
Smelters and refiners	17,000	41,400	3,790	4,380	3,620	19,500
Brass mills	1,850	4,440	366	453	408	1,950
Total alloyed scrap:						
Smelters and refiners	127,000	309,000	26,000	29,100	26,700	133,000
Brass mills	214,000	512,000	49,300	48,000	44,500	231,000
Total scrap:						
Smelters and refiners	277,000	671,000	61,500	60,000	62,200	301,000
Brass and wire-rod mills	384,000	902,000	84,200	86,100	83,500	413,000

p/ Preliminary.

1/ Does not include: consumption by foundries, chemical plants and miscellaneous manufacturers, estimated to total about 6,000 tons of scrap per month in 1995; consumption of home scrap at brass mills which averaged 57,200 tons per month in 1995. Monthly data include estimates of about 30,000 tons of scrap per month consumed by ingot makers and several smelters that report only on an annual basis.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal and commercial bronze.

4/ Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap."

5/ Includes refinery brass, beryllium copper, phosphor copper and aluminum bronze.

TABLE 11  
COPPER STOCKS AT END OF PERIOD 1/

(Metric tons)

Period	Crude copper 2/	Refined copper					Total refined
		Refineries 3/	Wire rod mills 3/	Brass mills 3/	Other 4/	Comex 5/	
1996: p/							
May	166,000	35,500	19,200	9,840	3,540	12,000	148,000
June	162,000	33,500	13,100	12,700	3,540	6,880	140,000
July	154,000	41,700	29,700	13,700	3,540	16,100	164,000
August	161,000	34,000	25,800	13,800	3,540	20,100	157,000
September	161,000	32,400	19,400	12,800	3,540	19,700	144,000
October	163,000	33,900	31,000	13,200	3,540	28,600	139,000
November	167,000	32,200	30,600	11,900	3,540	26,000	125,000
December	173,000	32,200	32,100	14,000	3,540	26,600	147,000
1997:							
January	168,000	30,200	28,000	13,100	3,540	16,700	151,000
February	172,000	33,000	22,300	13,000	3,540	22,500	154,000
March	142,000	35,500	23,600	10,900	3,540	38,600	161,000
April	134,000 r/	33,900 r/	23,300	11,500	3,540	44,300	161,000
May	123,000	35,500	27,000	11,400	3,540	38,700	173,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Copper content of blister and other materials in transit and in process of refining.

3/ Stocks of refined copper as reported; no estimates are made for nonrespondents.

4/ Monthly estimates based on reported and 1995 annual data, comprising stocks at secondary smelters, chemical plants, foundries, and miscellaneous manufacturers.

5/ Commodity Exchange Inc., New York.

6/ London Metal Exchange Ltd., U.S. warehouses.

TABLE 12  
AVERAGE PRICE OF COPPER IN THE UNITED STATES AND  
ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	U.S. producers delivered price		Comex first position 3/	LME cash price Grade A
	Cathode 1/	Wirebar 2/		
1996:				
May	126.667	135.327	123.327	120.527
June	107.828	116.538	104.488	98.447
July	94.007	102.693	90.667	90.006
August	95.479	104.139	92.139	91.072
September	93.848	102.623	90.508	88.026
October	96.873	105.533	93.533	88.935
November	104.097	112.776	100.776	101.149
December	104.114	114.781	102.781	102.837
Average	109.044	117.888	105.872	104.045
1997:				
January	111.949	120.054	108.291	110.417
February	113.564	122.224	110.224	109.081
March	118.141	126.803	114.803	109.803
April	113.034	110.444	109.696	108.420
May	117.064	127.248	115.248	114.025
Average	114.750	121.355	111.652	110.349

1/ Listed as "U.S. producer cathode."

2/ Listed as "Electrolytic wirebar (Warrenton Refining Co.)."

3/ Listed as "Comex high grade first position."

Sources: Platt's Metals Week and American Metal Market.



TABLE 13  
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

Month	Brass mills No. 1 scrap	Refiners No. 2 scrap	Dealers (New York)	
			No. 2 scrap	Red brass turnings and borings
1996:				
May	116.25	97.10	84.59	57.84
June	96.95	83.00	77.85	55.35
July	88.58	69.76	64.43	46.79
August	90.85	73.93	64.00	46.09
September	88.69	72.56	64.00	46.00
October	89.21	73.04	64.00	46.00
November	97.04	79.22	64.63	46.63
December	99.17	81.94	65.00	47.00
Average	101.53	84.42	75.27	51.85
1997:				
January	99.29	81.49	66.13	47.57
February	106.74	87.80	67.42	48.21
March	109.74	91.18	71.80	53.60
April	96.60	80.83	65.77	53.05
May	111.60	94.06	75.43	52.33
Average	104.79	87.07	69.31	50.95

Source: American Metal Market.

TABLE 14  
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1997			1997			1997			1997		
	1996	Apr.	Jan.-Apr.	1996	Apr.	Jan.-Apr.	1996	Apr.	Jan.-Apr.	1996	Apr.	Jan.-Apr.
Brazil	--	--	--	--	--	--	--	--	--	15,600	8,010	8,310
Canada	9,000	--	--	236	8	68	80,200	6,070	26,900	278,000	23,100	98,100
Chile	59,800	4,980	19,700	--	--	--	51,700	3,970	15,200	119,000	7,480	42,400
Germany	--	--	--	--	--	--	--	--	--	9,960	(2/)	1
Japan	--	--	--	--	--	--	(2/)	--	(2/)	3,940	923	2,840
Kazakhstan	--	--	--	--	--	--	--	--	--	2,630	--	3,020
Malaysia	--	--	--	79	--	--	--	--	--	--	--	--
Mexico	3,680	--	--	2,050	100	324	19,600	1,810	3,940	30,300	2,300	6,660
Peru	--	--	--	--	--	--	9,550	879	2,380	64,700	6,840	34,400
Russia	--	--	--	--	--	--	--	--	--	15,000	197	202
Spain	--	--	--	--	--	--	2,710	633	1,300	--	--	--
Taiwan	--	--	--	24	1	16	--	--	(2/)	(2/)	--	(2/)
Uzbekistan	--	--	--	--	--	--	--	--	--	3,570	1,830	1,830
Other	3	--	13	2	--	--	649	--	--	848 r/	12	347
Total	72,400	4,980	19,700	2,390	109	408	164,000	13,400	49,800	543,000	50,700	198,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 15  
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1996	1997		1996	1997		1996	1997		1996	1997	
		Apr.	Jan.-Apr.		Apr.	Jan.-Apr.		Apr.	Jan.-Apr.		Apr.	Jan.-Apr.
Belgium	--	--	--	3	68	248	239	--	52	46	3	13
Brazil	2,810	--	--	5	--	--	--	--	(2/)	25	--	--
Canada	79,900	7,970	22,600	31,500	2,960	10,900	18,000	1,340	5,390	28,700	2,020	8,180
China	54,500	--	9,150	2	--	--	44	--	997	233	--	--
Germany	76	--	6,090	1	--	--	463	--	68	189	25	39
Hong Kong	16	--	--	29	--	17	1,170	389	1,870	525	4	61
Italy	8	--	--	2	--	--	451	83	297	2,150	21	21
Japan	47,600	1,450	6,090	2,130	--	61	456	40	329	31,900	1,570	6,880
Korea, Republic of	1,570	--	3,060	19	8	8	1,100	72	450	3,480	205	1,840
Malaysia	--	--	--	--	--	--	(2/)	--	--	6,470	--	--
Mexico	2,340	--	--	2,790	1,300	6,380	410	42	154	11,800	123	750
Netherlands	--	--	--	3	--	7	--	--	--	33	22	417
Peru	1,750	--	--	--	100	100	--	--	--	141	--	--
Singapore	--	--	--	8	--	2	44	43	334	2,690	--	636
Spain	2,800	--	--	6	--	--	15	--	15	7	8	10
Taiwan	--	--	--	--	--	19	330	20	611	54,100	1,400	10,300
Thailand	--	--	--	--	--	--	112	--	22	26,400	299	2,990
Other	1,810 r/	--	2	564 r/	20	165	408 r/	43	421	874 r/	133	969
Total	195,000	9,420	47,000	37,100	4,460	17,900	23,200	2,080	11,000	170,000	5,840	33,100

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 16  
U.S. COPPER SCRAP TRADE 1/

(Metric tons, gross weight)

Country or territory	Imports						Exports					
	Unalloyed			Alloyed			Unalloyed			Alloyed		
	1997			1997			1997			1997		
	1996	Apr.	Jan.-Apr.	1996	Apr.	Jan.-Apr.	1996	Apr.	Jan.-Apr.	1996	Apr.	Jan.-Apr.
Belgium	--	--	--	33	--	4	9,380	142	1,520	1,440	36	299
Canada	40,500	5,310	19,200	57,700	4,750	18,700	104,000	9,040	37,700	41,900	3,940	14,000
Chile	11,800	--	1,210	178	38	75	--	--	--	5	--	--
China	--	--	--	79	--	--	12,600	1,750	4,700	24,900	2,840	9,300
Colombia	668	194	708	3,020	87	391	--	--	--	3	--	--
Costa Rica	1,320	75	401	386	79	183	--	--	--	--	--	--
Dominican Republic	603	58	347	1,940	65	390	--	--	--	--	--	--
Ecuador	29	--	--	872	126	205	--	--	--	4	--	--
Germany	4	1	1	122	20	79	7,190	2,420	10,100	5,290	268	888
Hong Kong	--	--	--	120	--	--	28,600	3,200	11,000	43,200	3,470	10,900
India	--	--	--	--	--	--	3,960	39	505	29,800	2,090	8,570
Italy	3	120	120	259	20	81	22	--	--	1,080	--	139
Japan	2	--	(2/)	83	32	68	19,300	1,680	6,400	18,700	1,200	4,810
Korea, Republic of	--	--	--	18	3	3	5,140	278	1,420	11,200	980	4,780
Mexico	27,900	2,390	8,140	42,400	3,200	13,000	2,470	80	216	4,030	403	1,500
Panama	1,020	100	435	1,100	68	294	--	--	--	--	--	--
Spain	138	--	--	292	13	28	39	60	60	757	272	291
Switzerland	--	--	--	--	--	17	2,760	--	--	18	--	--
Taiwan	102	7	10	1,480	241	1,070	1,340	34	133	4,970	299	1,180
Thailand	--	--	--	36	--	--	37	--	19	2,460	97	687
United Kingdom	(2/)	--	--	1,310	256	775	194	4	24	381	--	142
Venezuela	2,600	37	737	2,540	106	790	--	--	--	40	--	--
Other	3,670 r/	308	1,110	7,860 r/	646	3,210	612 r/	75	209	5,140 r/	361	1,440
Total	90,300	8,600	32,400	122,000	9,750	39,400	197,000	18,800	74,000	195,000	16,300	58,900

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.